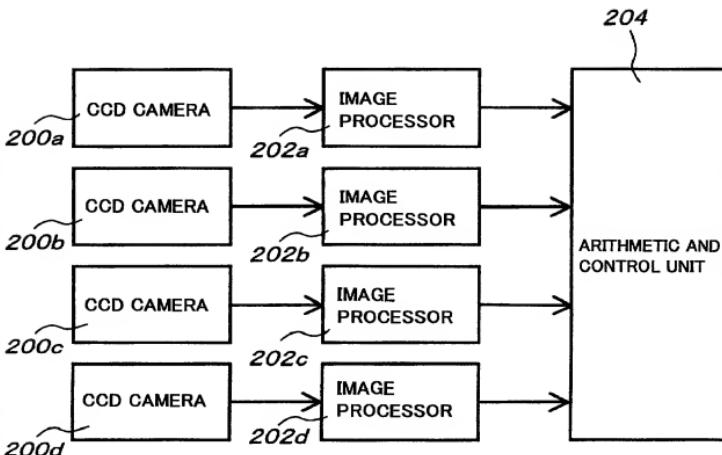


FIG. 1



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FIG. 2

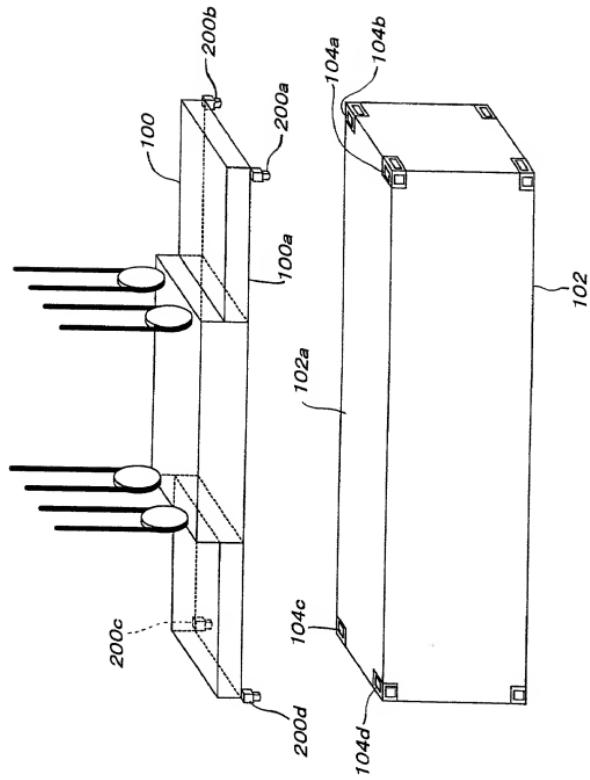


FIG. 3

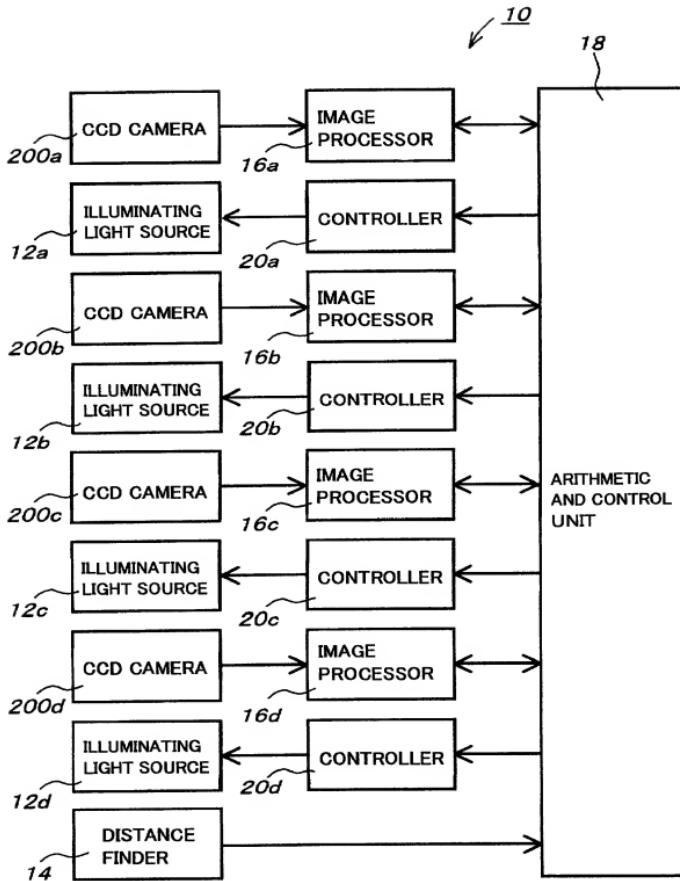


FIG. 4

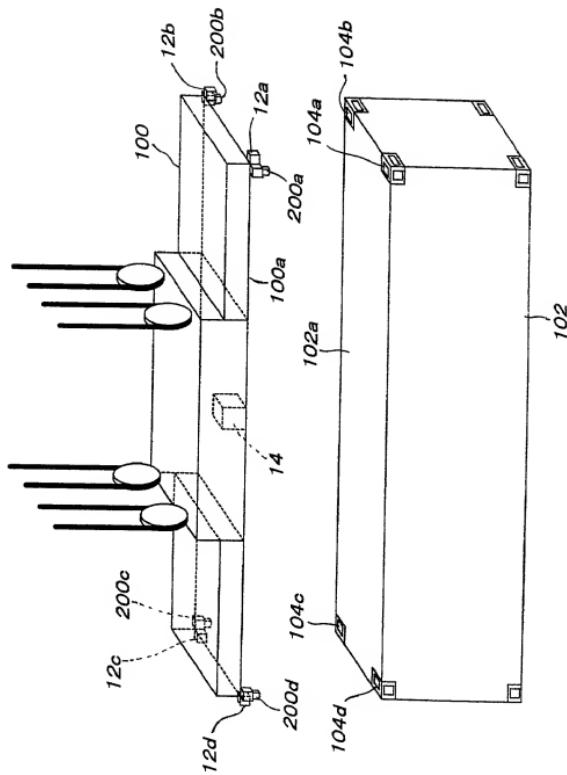


FIG. 5

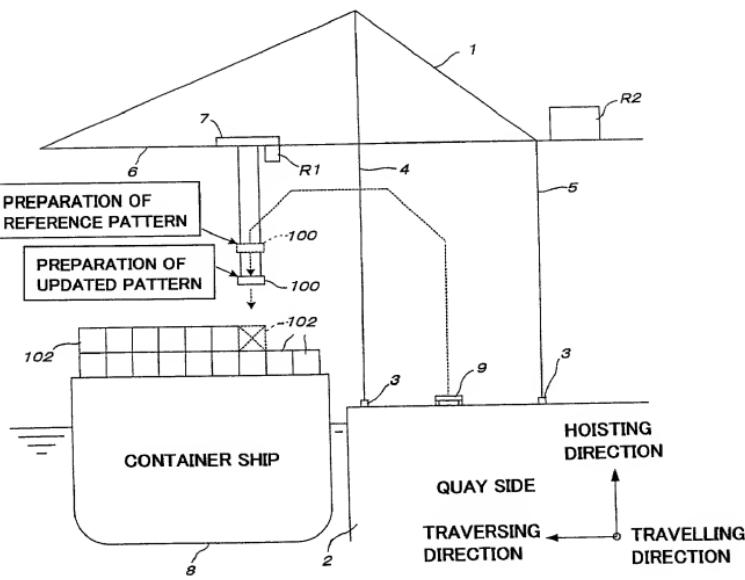
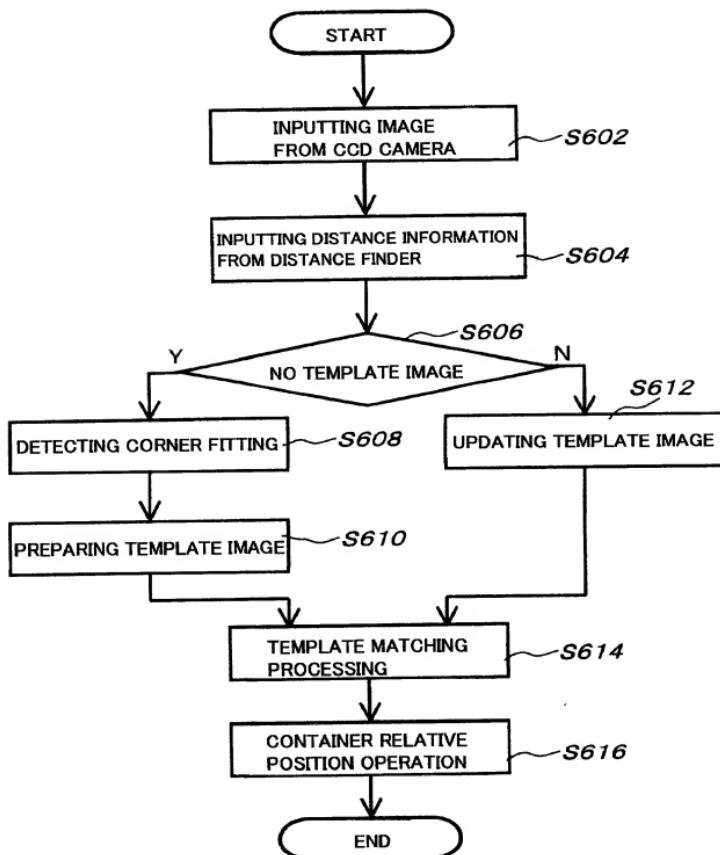


FIG. 6



00000000000000000000000000000000

FIG. 7(a)

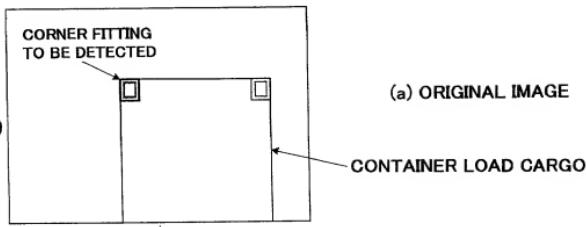


FIG. 7(b)

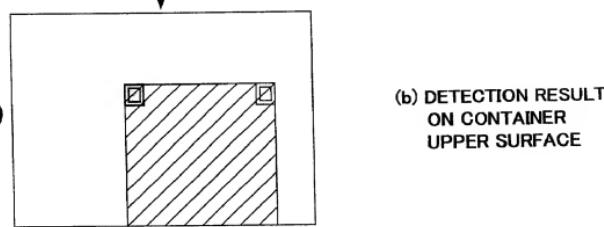


FIG. 7(c)

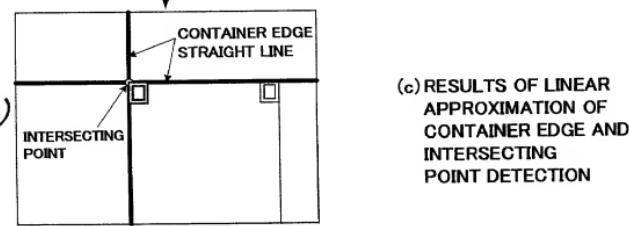


FIG. 7(d)

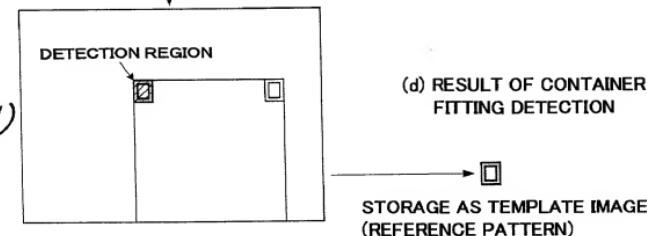


FIG. 8

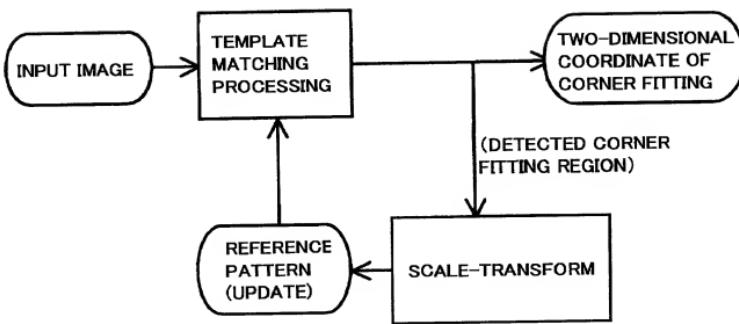
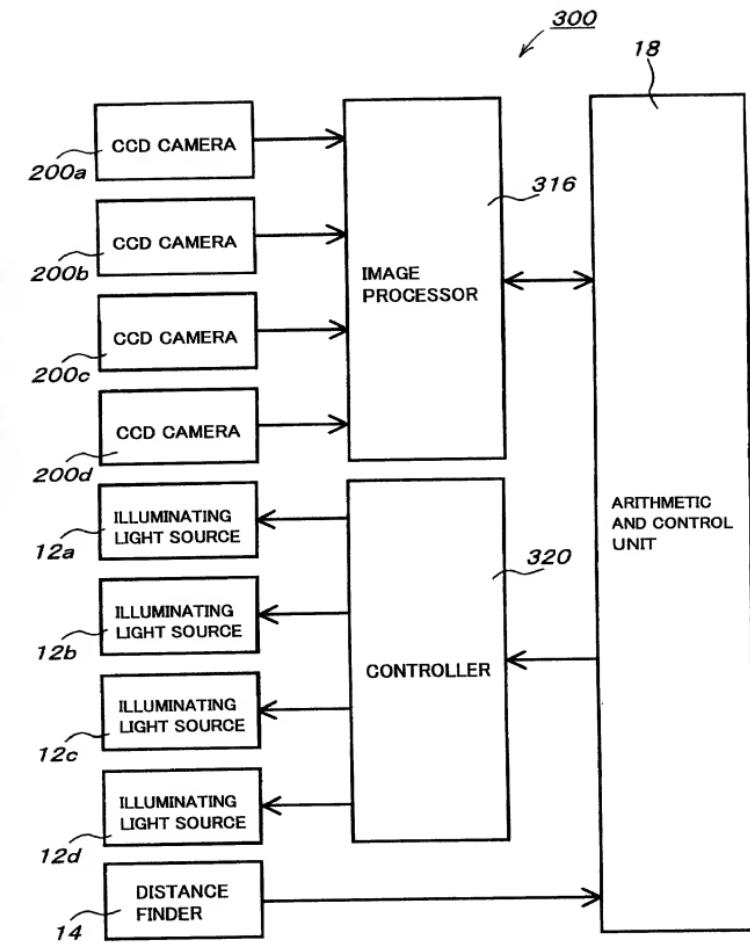


FIG. 9



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FIG. 10

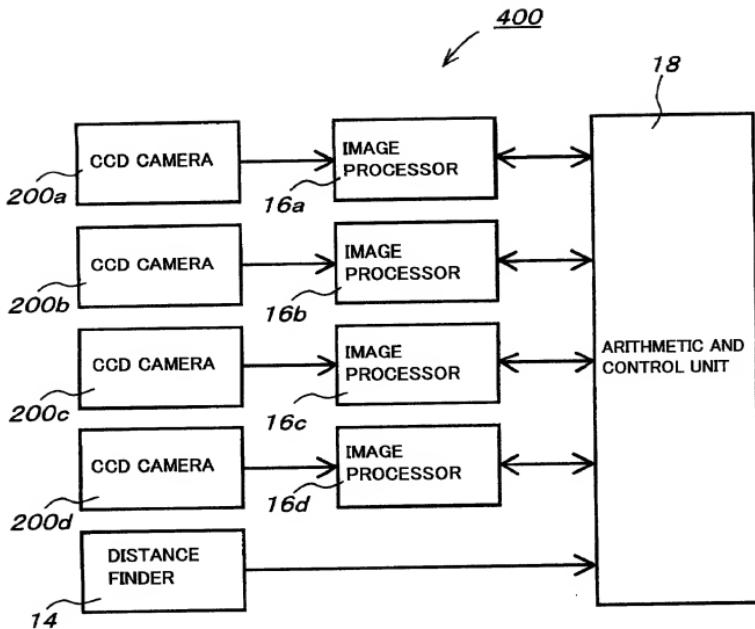


FIG. 11

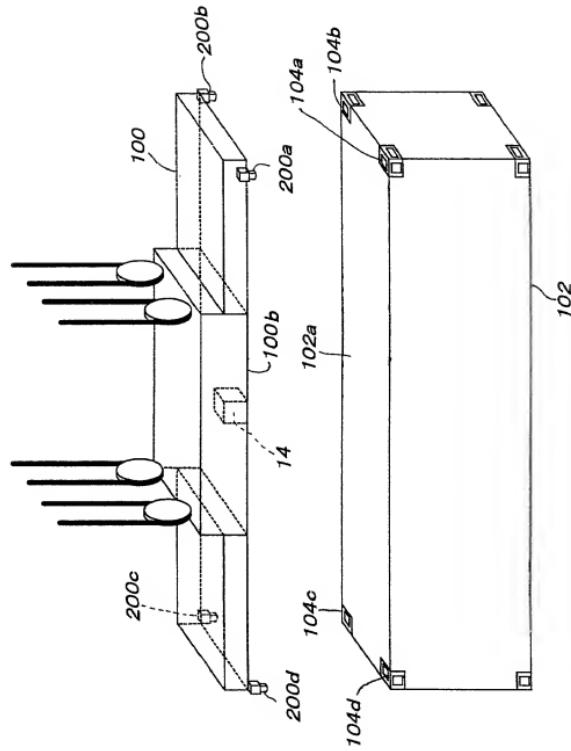


FIG. 12

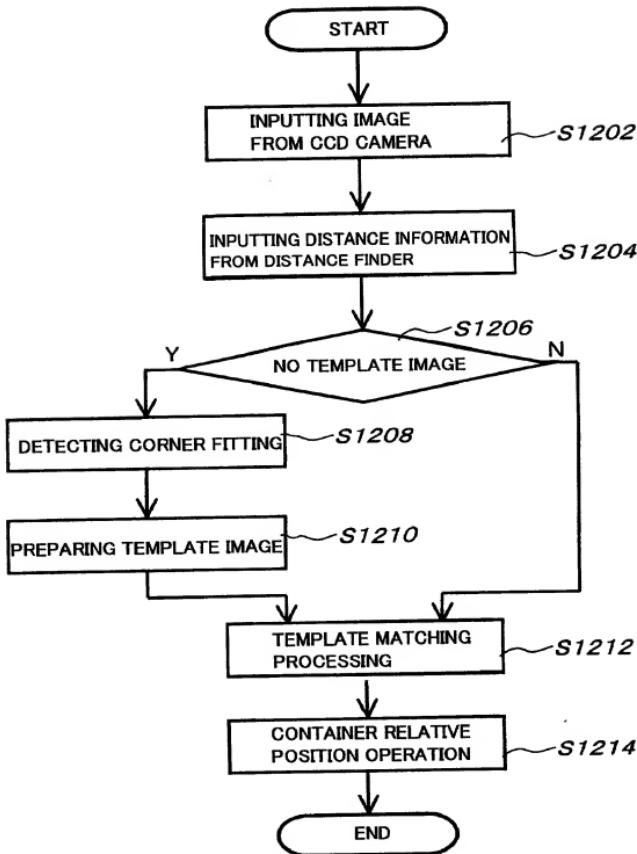
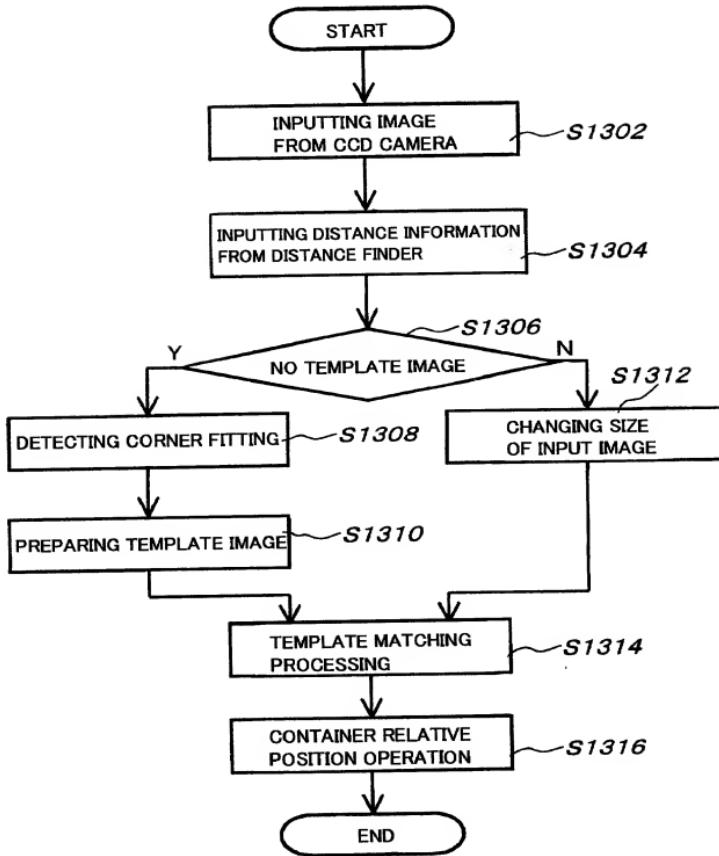


FIG. 13



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FIG. 14

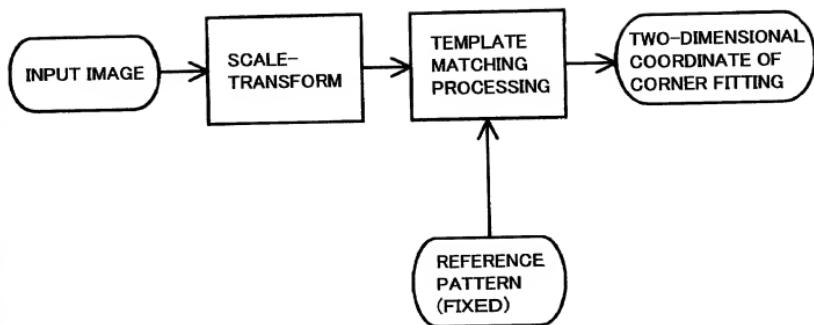


FIG. 15

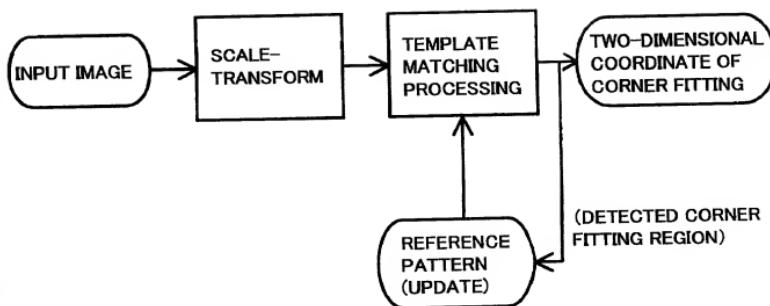


FIG. 16

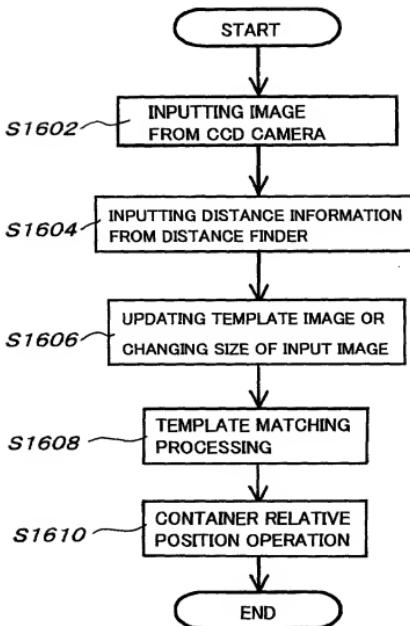


FIG. 17

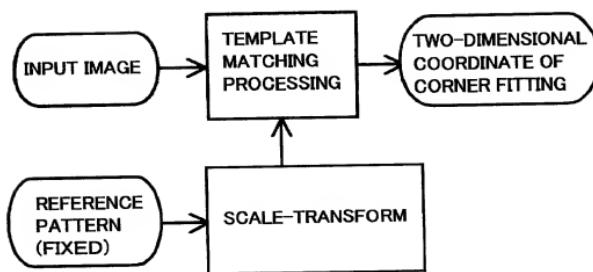


FIG. 18(a)

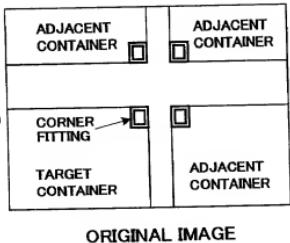


FIG. 18(d)

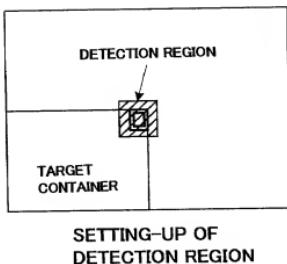


FIG. 18(b)

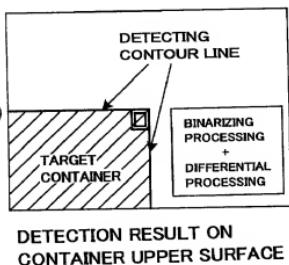


FIG. 18(e)

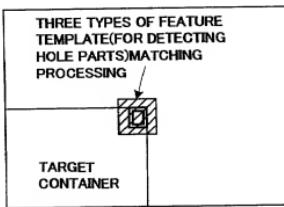


FIG. 18(c)

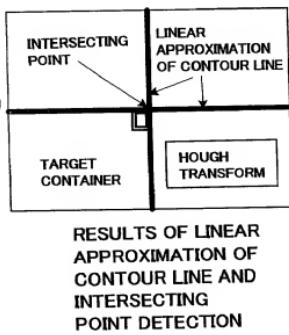


FIG. 18(f)

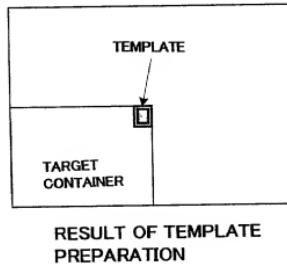


FIG. 19(a)

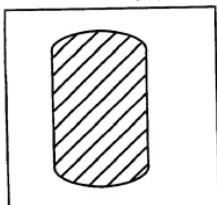
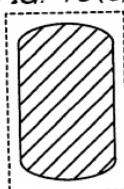


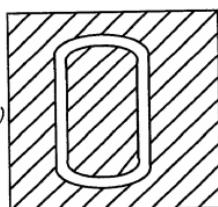
IMAGE DATA HAVING LOW
CONCENTRATION IN HOLE PART

FIG. 19(c)



FEATURE TEMPLATE
(FOR DETECTING HOLE PARTS)
IMAGE 1

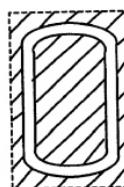
FIG. 19(b) 1729-030304



RESULT OF
DIFFERENTIAL PROCESSING



FIG. 19(d)



FEATURE TEMPLATE
(FOR DETECTING HOLE PARTS)
IMAGE 2

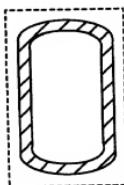
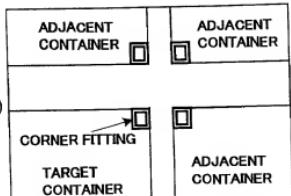


FIG. 19(e)

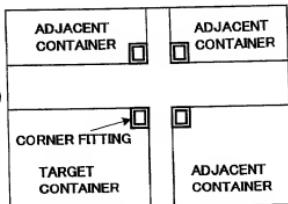
FEATURE TEMPLATE
(FOR DETECTING HOLE PARTS)
IMAGE 3

FIG. 20(a)



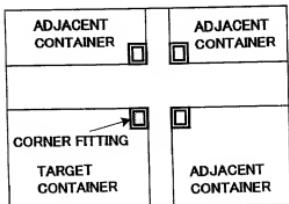
ORIGINAL IMAGE

FIG. 20(b)



THREE TYPES OF FEATURE TEMPLATE
(FOR DETECTING HOLE PARTS)
MATCHING PROCESSING
(WHOLE IMAGE DATA)

FIG. 20(c)



RESULT OF TEMPLATE
PREPARATION

FIG. 21(a)

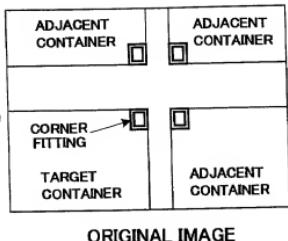


FIG. 21(d)

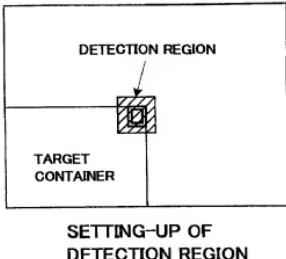


FIG. 21(b)

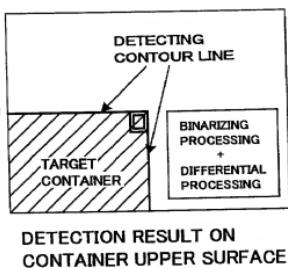
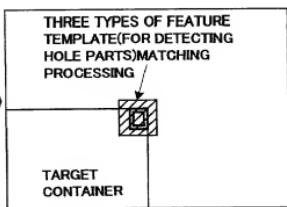


FIG. 21(e)



FEATURE TEMPLATE (FOR DETECTING HOLE PARTS) MATCHING PROCESSING

FIG. 21(c)

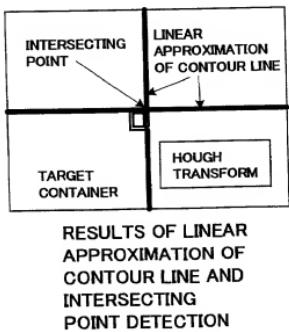
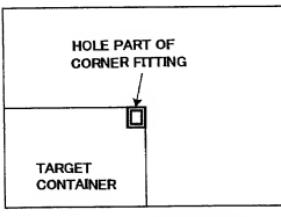
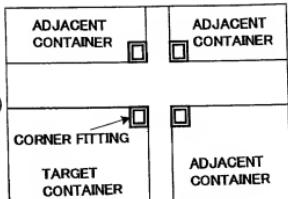


FIG. 21(f)



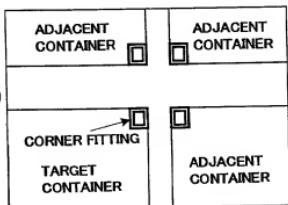
RESULT OF TEMPLATE PREPARATION

FIG. 22(a)



ORIGINAL IMAGE

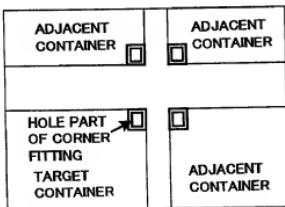
FIG. 22(b)



FEATURE TEMPLATE
(FOR DETECTING HOLE PARTS)
MATCHING PROCESSING

THREE TYPES OF FEATURE TEMPLATE
(FOR DETECTING HOLE PARTS)
MATCHING PROCESSING
(WHOLE IMAGE DATA)

FIG. 22(c)



RESULT OF TEMPLATE
PREPARATION